

WHAT IS CLAIMED IS:

1 1. A method for metering dry powder material using a metering
2 valve comprising the following steps:

3 introducing powdered material into a hollow interior of a meter valve
4 housing via an inlet provided on said housing,

5 rotating a valve sleeve provided within said housing so that a lip
6 provided within the housing surrounding the inlet as a sealing
7 surface moves to create an opening between the sleeve and
8 surrounding housing that allows the metered powdered material to
9 begin flowing through said inlet to an outlet provided in said
10 housing, and

11 further rotating the valve sleeve so that an enlarged gap is formed
12 between the enlarged non-circular housing and the circular valve
13 sleeve everywhere within the housing except at the lip.

1 2. A method for metering dry powder material using a metering
2 valve according to claim 1 wherein the valve sleeve can be opened

3 by rotating the valve sleeve either to in a clockwise or
4 counterclockwise direction.

1 3. A method for metering dry powder material using a metering
2 valve comprising the following steps:

3 rotating a rotatable intermediate sleeve provided attached to said
4 housing so that the intermediate sleeve rotates eccentric to the
5 centerline of the hollow housing so that a valve sleeve which is
6 attached to said rotatable intermediate sleeve alternately moves
7 toward and away from the inlet in response to rotation of the
8 intermediate sleeve,

9 introducing powdered material into a hollow interior of a meter valve
10 housing via an inlet provided on said housing,

11 rotating the valve sleeve provided within said housing so that a lip
12 provided within the housing surrounding the inlet as a sealing
13 surface disengages the sleeve and thus allows the metered
14 powdered material to begin flowing through said inlet to an outlet
15 provided in said housing, and

16 further rotating the valve sleeve so that an enlarged gap is formed
17 between the enlarged non-circular housing and the circular valve
18 sleeve every where within the housing except at the lip.

1 4. A method for metering dry powder material using a metering
2 valve according to claim 3 wherein the valve sleeve can be opened
3 by rotating the valve sleeve either clockwise or counterclockwise.

1 5. A metering valve for metering dry powder material
2 comprising:

3 a meter valve housing with an inlet provided on a front side of said
4 housing for admitting powdered material into a hollow interior of the
5 housing, a lip provided within the housing surrounding the inlet as a
6 sealing surface, an outlet provided in said housing through which
7 metered powdered material leaves the housing, a valve sleeve
8 rotatably suspended within said housing to regulate flow of
9 powdered material through said inlet, said valve sleeve rotatably
10 openable in either a clockwise or counterclockwise direction, and

11 the interior of the housing being noncircular by being enlarged
12 slightly except at the lip so that an enlarged gap is formed between

13 the housing and the circular valve sleeve every where within the
14 housing except at the lip.

1 6. A metering valve for metering dry powder material according
2 to claim 5 further comprising:

3 ball bearing provided in said housing for rotatable suspending said
4 valve sleeve within said housing in order to allow the valve sleeve
5 to rotate easily within the housing either in a clockwise or
6 counterclockwise direction.

1 7. A metering valve for metering dry powder material
2 comprising:

3 a meter valve housing with an inlet provided on a front side of said
4 housing for admitting powdered material into a hollow noncircular
5 interior of the housing, an outlet provided in said housing through
6 which metered powdered material leaves the housing, a circular
7 valve sleeve rotatably suspended within said housing to regulate
8 flow of powdered material through said inlet, said valve sleeve
9 rotatable in either a clockwise or counterclockwise direction, and

- 10 ball bearings provided in said housing for rotatably suspending said
- 11 valve sleeve within said housing in order to allow the valve sleeve
- 12 to rotate easily within the housing.